

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JOHN A. SABOLICH,  
and KEVIN M. CARROLL

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Appeal No. 99-0514  
Application 08/636,421<sup>1</sup>

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ON BRIEF

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Before CALVERT, MEISTER and GONZALES, Administrative Patent Judges.

CALVERT, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 5 to 14. Claims 1 to 4, the other claims in the application, have been allowed.

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<sup>1</sup> Application for patent filed April 23, 1996.

The appealed claims are drawn to a prosthesis for the residual thigh of an above-the-knee amputee, and are reproduced in the appendix of appellants' brief.

The reference applied in the final rejection is:

MOPR (Russian)	425,629	Apr. 30, 1974 <sup>2</sup>
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An additional reference, of record, applied herein pursuant to 37 CFR § 1.196(b), is:

Sabolich	5,246,464	Sept. 21, 1993
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Claims 5 to 14 stand finally rejected under 35 U.S.C. § 103(a) as unpatentable over MOPR.

MOPR discloses a prosthesis for the residual thigh, in which there is an outer member surrounding the thigh, and two series of alternatively inflatable compartments 3 and 4 within the outer member, divided by separators 2, for improving blood flow in the thigh. The reference states that the compartments ("subsections" or "sections") are "located along the muscles" or "located along the muscle groups of the limb in question" (translation, page 1, lines 13, 14, 20 and 21). The examiner takes the position that (final rejection, page 2):

It is not clear from Figure 1 [of MOPR] as to whether the compartments extend along substantially the entire length of the residual limb; however, in view of the intended purpose of the device, such would have been immediately obvious, if not innate, in order to improve blood flow in the distal part of the leg, where problems often occur. The Applicant does not present any basis for the conclusion that the compartments are "of equal size". Figure 2 depicts a rather elliptical, asymmetric geometry in conformance with the anatomy of the thigh itself; the separators 2 extend along

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<sup>2</sup> Our understanding of this reference is based upon a translation filed by appellants on August 18, 1997.

longitudinal contours of the residual leg. To arrange the separators 2 so as to coincide with *natural* longitudinal contours between muscles of the thigh would thus have been directly obvious, if not immediately apparent, from the MOPR teaching.

After fully considering the record in light of the arguments presented in appellants' brief and the examiner's answer, we conclude that claims 5 to 14 are patentable over the MOPR reference. In this regard, we agree with appellants that MOPR does not teach or suggest that the separators 2 between the compartments 3 and 4 should extend along the natural contours between the thigh muscles, and in particular, the channels defined by the specific muscles recited in claims 5 to 14. Looking at Fig. 2 of MOPR, it is, first, not clear whether the separators 2 engage natural contours (depressions) of the thigh, or simply are pressing into the thigh. Also, it appears that the separators and compartments just run vertically along the outside of the thigh, and we do not regard the reference's disclosure that the compartments (sections) are located along the muscles or muscle groups of the thigh as suggesting any more than this. There is certainly no specific disclosure that the compartments (i.e., the separators) follow the natural channels in the thigh, nor is there any teaching or suggestion that they should do so. In our view, the examiner's holding that it would have been obvious to arrange the MOPR separators to follow the natural contours between muscles of the thigh was the result of impermissible hindsight, based on appellants' disclosure.

Accordingly, the rejection of claims 5 to 14 will not be sustained.

Rejections Pursuant to 37 CFR § 1.196(b)

(1) Claims 5 to 8 are rejected as unpatentable over Sabolich, under 35 U.S.C. §§ 102(b) or 103(a).

Sabolich discloses essentially the same system as appellants, namely, a prosthesis for the residual thigh of an above-the-knee amputee, having a limb assembly 14, a socket 16 therein, and an inflatable compartment 18 associated with the socket. The differences, if any, between the apparatus recited in claims 5 to 8 (as well as claims 9 to 14) and that disclosed by Sabolich reside in the configuration of the particular channels in the socket.

With regard to the channels recited in claims 5 and 7, Sabolich discloses a channel 24 (Fig. 3) and a channel 26 (Fig. 4) which correspond, respectively, to the channels recited in these claims, being defined by the same muscles (col. 5, lines 39 to 56). Sabolich does not specifically state that either of these channels "is shaped to conform substantially to a channel which extends substantially to the distal end of the muscles of the residual thigh," as recited in claims 5 and 7, but we consider that these claims are nevertheless anticipated by Sabolich under § 102(b) because: (i) Sabolich's channels 24 and 26, as shown in Figs. 3 and 4, extend "substantially" to the distal end of the muscles of the residual thigh, as broadly recited. (ii) The proximity of the lower ends of Sabolich's channels 24 and 26 to the distal end of the residual thigh would be dependent on the length of the residual thigh. Considering claim 7 for example, if the residual thigh were so short that the channel defined anteriorly by the vastus lateralis

muscle and posteriorly by the biceps femoris muscle-lateral head extended to the distal end of the residual thigh, then the corresponding channel 26 in the socket would also extend to the distal end. Thus, if the residual thigh for which the socket of Sabolich was made were sufficiently short, channels 24 and 26 would extend at least "substantially" to the distal end.

Alternatively, it would have been obvious to extend Sabolich's channels 24 and 26 to "substantially" the distal end of the muscles of the residual thigh. Since Sabolich teaches that the socket should be "shaped to conform to the anatomical features of the patient's residual thigh" (col. 2, lines 42 to 45) and to "conform anatomically to the residual thigh on which it is to be worn" by providing the socket "with a plurality of contours which correspond to the anatomical contours of the residual limb" (col. 3, lines 33 to 37), one of ordinary skill would have found it obvious to apply this teaching to the entire residual thigh, including the distal end, by extending the recited channels substantially to the distal end.

(2) Claims 9 to 14 are rejected under 35 U.S.C. § 103(a) as unpatentable over Sabolich. Each of claims 9, 11 and 13 recites a channel in the socket which corresponds to a known channel, groove or contour in the thigh. Thus, as appellants disclose, there is (i) a groove between the semitendinosus muscle and the biceps femoris muscle (page 9, lines 16 and 17); (ii) a channel on the lateral thigh defined posteriorly by the iliotibial band, etc. (page 10, lines 21 to 24); and (iii) a contour between the rectus femoris muscle and the vastus lateralis muscle (page 11, lines 1 and 2). To provide the socket

16 of Sabolich with channels corresponding respectively to each of the aforementioned groove, channel and contour, as recited in claims 9, 11 and 13 respectively, would have been obvious in view of the above-noted teaching of Sabolich to shape the socket to conform to the anatomical features, particularly the contours, of the residual thigh. Also, as to claim 11, it would have been obvious to extend such channel substantially to the distal end of the muscles of the residual thigh, for the reasons stated above with regard to claims 5 to 8.

#### Conclusion

The examiner's decision to reject claims 5 to 14 is reversed. Claims 5 to 14 are rejected pursuant to 37 CFR § 1.196(b).

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the

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examiner, in which event the application will be remanded to the examiner. . . .

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(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED  
37 CFR § 1.196(b)

IAN A. CALVERT	)	
Administrative Patent Judge	)	
	)	
	)	BOARD OF PATENT
	)	APPEALS AND
JAMES M. MEISTER	)	INTERFERENCES
Administrative Patent Judge	)	
	)	
	)	
JOHN F. GONZALES	)	
Administrative Patent Judge	)	

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